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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/599,345      | 05/07/2009  | Jeroen Jonkers       | 2004P00731WOUS      | 5708             |

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

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| EXAMINER |
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IPPOLITO RAUSCH, NICOLE

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2881

|                   |               |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

10/20/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

vera.kublanov@philips.com  
debbie.henn@philips.com  
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|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/599,345             | JONKERS ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | NICOLE IPPOLITO-RAUSCH | 2881                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1-19 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-19 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 13 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection. Please see below.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silfvast et al. (U.S. Patent Number 6232613, from hereinafter "Silfvast") in view of Shiraishi (U.S. Patent Number 6842221, from hereinafter "Shiraishi").

5. In regards to claims 1, 7 and 13, Silfvast teaches a lithographic device and method (column 1 lines 5-20) with a means of removing contaminant particles produced

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by a radiation source (abstract) produced by a radiation source during generation of short-wave radiation having a wavelength of up to approximately 20nm (column 1 lines 29-35) comprising guiding a first gas at a first side of a particle trapped arranged in a wall of a chamber between the radiation source and the particle trap (FIG. 4B, gas labeled "G", radiation labeled "E") introducing a second gas into the chamber at a second side of the particle trap, wherein the first side is different from the second side (FIG. 4B, gas labeled "G", radiation labeled "E") and adjusting a pressure of the second gas to be at least high as a pressure of the first gas (columns 6-7 lines 4-16).

In regards to claims 1, 7 and 13, Silfvast fails to teach that the second gas is different from the first gas and the second side does not include the first gas.

Shiraishi teaches that the second gas is different from the first gas and the second side does not include the first gas (FIGS. 1-3, valves and supplies as discussed in column 15 lines 15-35).

In view of the teaching of Shiraishi it would have been obvious to one of ordinary skill in the art at the time the invention was made that the second gas is different from the first gas and the second side does not include the first gas. So doing will allow for different uses of the gas, i.e. cleaning, purging, neutralizing, etc., as discussed by Shiraishi, which will allow for a more pure and less debris-laden light to reach the final use, whatever that may be.

6. In regards to claims 2 and 8, Silfvast teaches that the adjusting act adjusts the pressure of the second gas to be higher than the pressure of the first gas (column 2 lines 16-42, column 3 lines 23-38, etc.).

7. In regards to claims 3 and 9, Silfvast teaches that the guiding act guides the first gas transversely to the propagation direction of the radiation in a channel that is at least partially laterally bounded (FIG. 4B illustrates this orientation).
8. In regards to claims 4 and 10, Silfvast teaches that the first gas comprises a noble gas having an atomic weight of at least 39 g/mol (column 6 lines 20-55).
9. In regards to claims 5 and 11, Silfvast teaches that the second gas comprises a substance that is substantially transparent for the radiation, the second gas including helium or hydrogen (column 6 lines 20-55 mentions helium).
10. In regards to claims 6 and 12, Silfvast teaches that the act of adjusting a flow velocity of the first gas and/or the second gas (columns 4-5 lines 61-15, columns 5-6 lines 61-5, etc.).
11. In regards to claims 14-15, Silfvast teaches generating radiation in a wavelength range of approximately 2-20 nm for a lithography device/microscope (column 1 lines 1-26, column 2 lines 16-20).
12. In regards to claims 16 and 18, Silfvast teaches that the act of introducing the second gas prevents the first gas from flowing through the particle trap from the first side to the second side (FIG. 4B, columns 6-7 lines 21-16, this 'uniform density' is a side-effect of the back-pressure of the gas).
13. In regards to claims 17 and 19, Silfvast teaches that the act of introducing the first gas from a first source at the first side of the particle trap, wherein the act of introducing the second gas introduced the second gas from a second source at the second side of the particle trap (FIG. 4B, columns 6-7 lines 21-16).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE IPPOLITO-RAUSCH whose telephone number is (571)270-7449. The examiner can normally be reached on Monday through Thursday 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. I./  
Examiner, Art Unit 2881

/PHILLIP A JOHNSTON/

Primary Examiner, Art Unit 2881